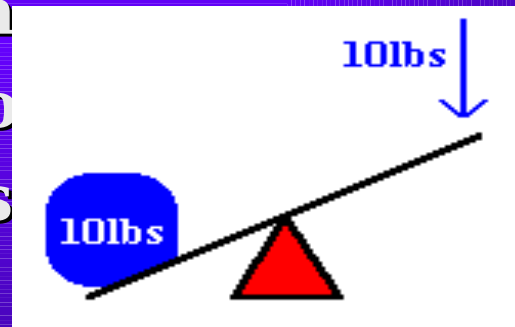


The Forces Involved

The amount of force you place on your back in lifting may surprise you!

Think of your back as a lever.

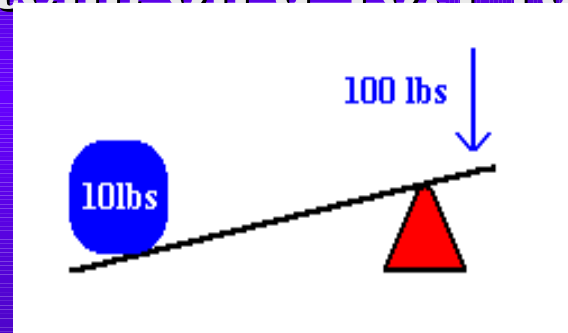
With the fulcrum in the center, it takes ten pounds pressure to lift a pound object.



The Forces Involved

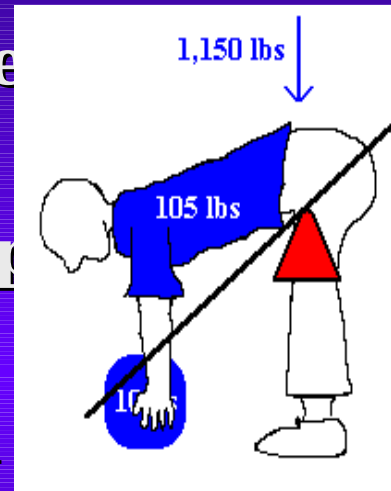
If you shift the fulcrum to one side, it takes much more force to lift the same object. Your waist acts like the fulcrum in a lever system, on a 10:1 ratio.

Lifting a ten pound object puts 100 pounds of pressure on your lower back.



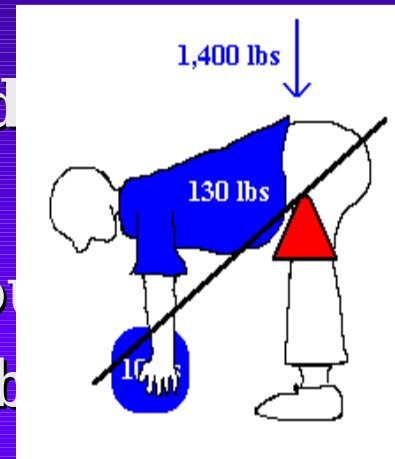
The Forces Involved

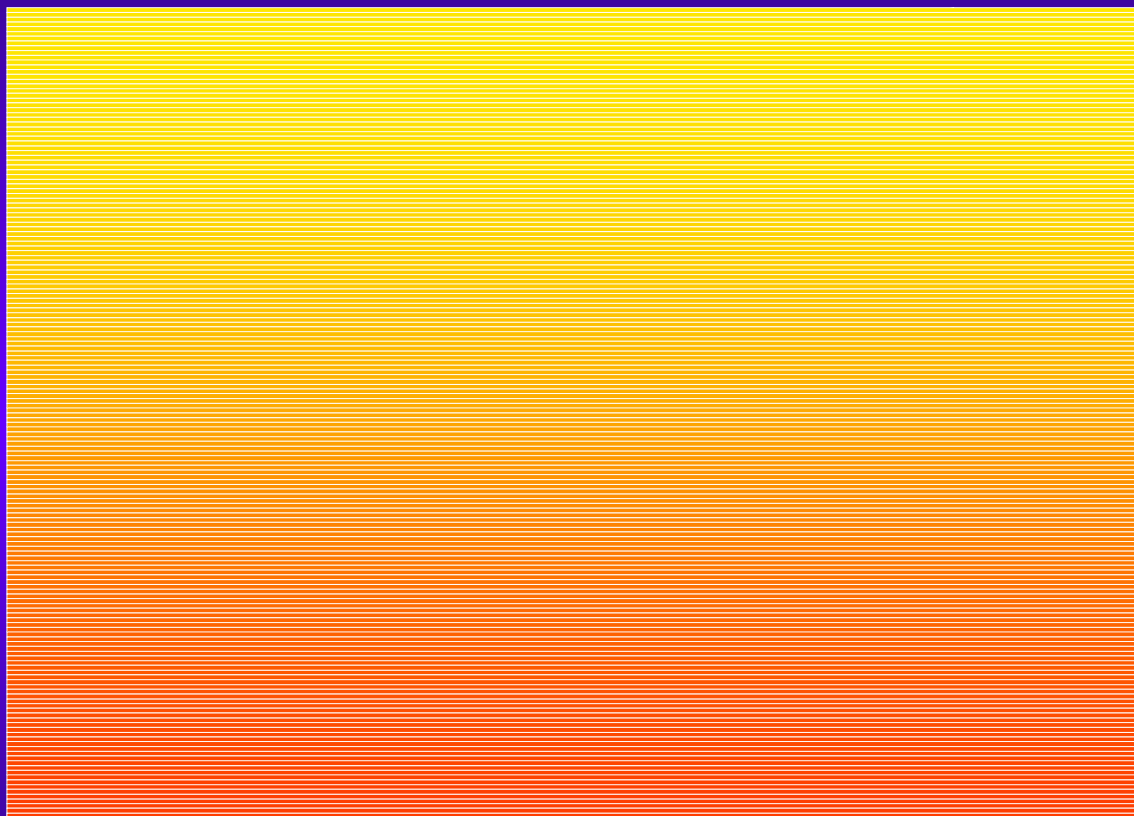
When you add in the 105 pounds of the average human upper torso, you see that lifting a ten pound object actually puts 1,150 pounds of pressure on the lower back.



The Forces Involved

If you were 25 pounds overweight, it would add an additional 250 pounds of pressure on your back every time you bend over.





Common Causes of Back Injuries

Anytime you find yourself doing one of these things, you should think:

DANGER!

My back is at risk!

Try to avoid heavy lifting
. . especially repetitive
lifting over a long period
of time



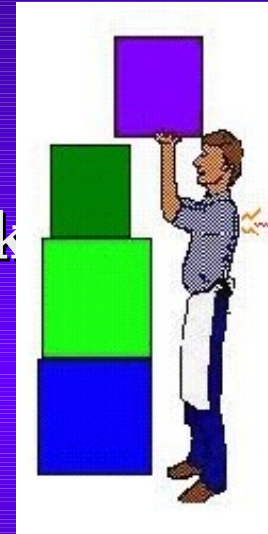
Common Causes of Back Injuries

Twisting at the waist while lifting or holding a heavy load . . . this frequently happens when using a shovel.



Common Causes of Back Injuries

Reaching and lifting . .
over your head, across
a table, or out the back
of a truck



Common Causes of Back Injuries

Lifting or carrying
objects with awkward
or odd shapes



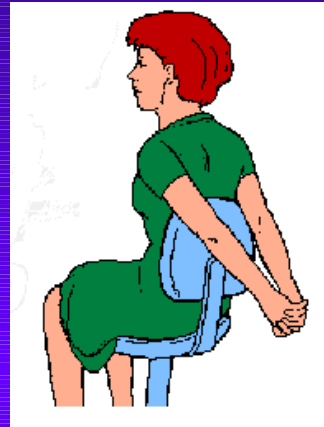
Common Causes of Back Injuries

Working in awkward, uncomfortable position



Common Causes of Back Injuries

Sitting or standing too long in one position . . . sitting can be very hard on the lower back



Common Causes of Back Injuries

It is also possible to injure your back slipping on a wet floor or ice







Prevent Back Injuries

- Avoid lifting and bending whenever you can.
- Place objects up off the floor.
- Raise/lower shelves.
- Use carts and dollies.
- Use cranes, hoists, lift tables, and other lift-assist devices whenever you can.
- Test the weight of an object before lifting by picking up a corner.
- Get help if it's too heavy for you to lift it alone.



Prevent Back Injuries

- **Use proper lift procedures Follow these steps when lifting**
 - **Take a balanced stance, feet shoulder-width apart**
 - **Squat down to lift, get as close as you can.**



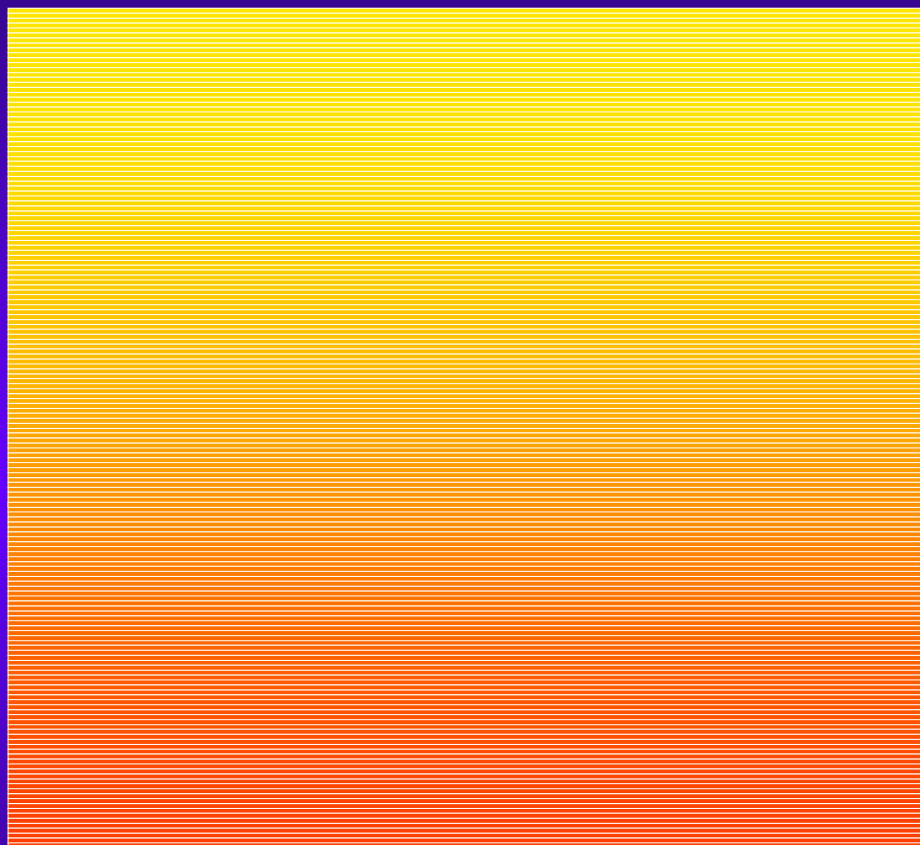
Prevent Back Injuries

- **Get a secure grip, hug the load.**
- **Lift gradually using your legs, keep load close to you, keep back and neck straight.**



Prevent Back Injuries

- o Once standing, change directions by pointing your feet and turn your whole body. Avoid twisting at your waist.
- o To put load down, use these guidelines in reverse.





Things You Can Do

- **Minimize problems with your back by exercises that tone the muscles in your back, hips and thighs.**
- **Before beginning any exercise program, you should check with your doctor**



Exercise!

- **Exercise regularly, every other day.**
- **Warm up slowly . . . A brisk walk is a good way to warm up**
- **Inhale deeply before each repetition of an exercise and exhale when performing each repetition.**

Exercises To Help Your Back

Wall slides to strengthen
your muscles

Stand with your back
against a wall, feet
shoulder-width apart.
Slide down into a crouch
with knees bent to 90 degrees.
Count to 5 and slide back up
the wall. Repeat 5 times.



Exercises To Help Your Back

- o Leg raises to strengthen back and hip muscles . . .
- o Lie on your stomach.
- o Tighten muscles in one leg and raise leg from floor.
- o Hold for count of 10, and return leg to floor.
- o Do the same with your other leg.
- o Repeat with each leg.



Exercises To Help Your Back

Leg raises to strengthen back and hip muscles

Lie on back, arms at your sides. Lift one leg off floor and hold for count of ten. Do the same with the other leg. Repeat 5 times with each leg. If this is too difficult... keep the knee bent and the foot flat on the floor while raising the other leg.



Exercises To Help Your Back

Leg raises while seated . . .

Sit upright, legs straight

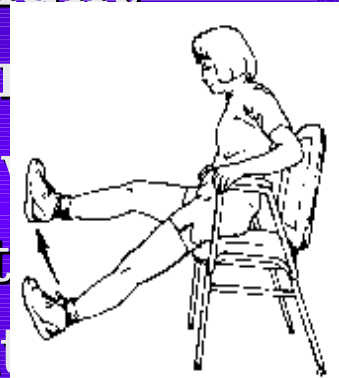
and extended at an angle

to floor. Lift one leg

high. Slowly return to

floor. Do the same with

the other leg.



Repeat 5 times with
each leg.

Exercises To Help Your Back

Partial sit-up to strengthen stomach muscles

Lie on back, knees bent and feet flat on floor. Slowly raise head and shoulders off floor and reach both hands toward your knees. Come back down. Repeat 5 times.



Exercises To Help Your Back

Back leg swing to strengthen hip and back muscles

Stand behind chair, hands on chair. Lift one leg back and up, keeping the knee straight. Return slowly. Raise other leg and return.



Repeat 5 time with each leg.

Exercises To Decrease the Strain on Your Back

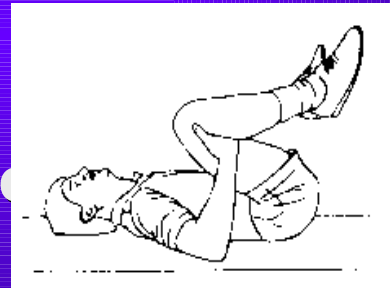
Lie on back, knees bent, feet flat on floor.

Raise knees toward chest.

Place hands under knees & pull knees to chest.

Do not raise head.

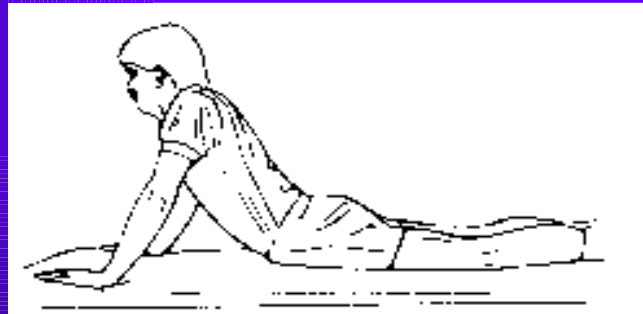
Do not straighten legs
as you lower them.



Start with 5 repetitions,
several time a day.

Exercises To Decrease the Strain on Your Back

Lie on stomach, hands under shoulders, elbows bent and push up. Raise top half of body as high as possible. Keep hips and legs on floor. Hold for one or two seconds. Repeat 10 times, several times a day.



Exercises To Decrease the Strain on Your Back

Stand with feet apart.
Place hands in small of back. Keep knees straight.
Bend backwards at waist as far as possible and hold for one or two seconds.

Repeat as needed.





Take care of your back...

- And it will take care of you
- Exercise daily
- Avoid Heavy Lifting
- Get Help with heavy or bulky objects
- If you must bend over, do it properly
- Avoid twisting at the waist when carrying objects
- Always watch where you're going